

Certificate of Analysis / Certificat D'Analyse

Propylene Glycol 99.9% USP/EP, Food Grade, Kosher and Halal

Propylène Glycol 99.9% USP/EP, Qualité Alimentaire, Kascher et Halal

Manufacturer: North American

TEST	METHOD	UNIT	MIN	MAX	RESULTS
Assay*	USP	%	99.80	-	99.93
Acidity (as Acetic Acid)*	USP	mL	-	0.20	0.02
Chlorides*	USP	ppm	-	70	<70
Residue on Ignition (per 50 g)*	USP	mg	-	3.50	0.48
Specific Gravity @ 25/25°C	USP	-	1.035	1.037	1.036
Sulfate*	USP	ppm	-	60	<60
Water Content	USP	%	-	0.200	0.009
Identification Test A, Matches IR Scan	USP	-	Pass	-	Pass
Identification Test B, Limit of Ethylene Glycol	USP	-	Pass	-	Pass
Identification Test B, Limit of Diethylene Glycol	USP	-	Pass	-	Pass
Identification Test C, Matches GC Scan	USP	-	Pass	-	Pass
Acidity*	EP	mL	-	0.05	0.02
Boiling Point*	EP	°C	184	189	185
Clarity*	EP	-	Pass	-	Pass
Color*	EP	-	Pass	-	Pass
Melting Point*	EP	°C	121	128	126
Oxidizing Substances, 0.05M Sodium Thiosulfate*	EP	mL	-	0.20	0.05
Reducing substances*	EP	-	Pass	-	Pass
Refractive Index @ 20°C	EP	-	1.431	1.433	1.433
Relative Density @ 20/20°C	EP	-	1.035	1.040	1.038
Sulfated Ash*	EP	-	-	0.0100	0.0016
Water Content	EP	wt. %	-	0.200	0.009
Assay*	FCC	%	99.80	-	99.93
Acidity*	FCC	-	Pass	-	Pass
Appearance (Clear, Free of Suspended Matter)	FCC	-	Pass	-	Pass
Distillation - IBP*	FCC	°C	185.0	-	186.8
Distillation - DP*	FCC	°C	-	189.0	188.0

* Data based on manufacturer's document

John

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Lead (Pb)*	FCC	ppm	-	1.0	<1.0
Identification, Matches IR Scan	FCC	-	Pass	-	Pass
Residue on Ignition*	FCC	%	-	0.0070	0.0014
Specific Gravity @ 25/25°C	FCC	-	1.035	1.037	1.036
Water Content	FCC	wt. %	-	0.200	0.009
Acidity*	JP	-	Pass	-	Pass
Arsenic*	JP	ppm	-	2.0	<2.0
Chlorides*	JP	%	-	0.007	<0.007
Distillation Range, 184-189°C*	JP	% vol	95	-	97
Glycerin (Odor)*	JP	-	Pass	-	Pass
Heavy Metals*	JP	ppm	-	5.0	<5.0
Melting Point*	JP	°C	174	178	175
Odor*	JP	-	Pass	-	Pass
Residue on Ignition*	JP	%	-	0.0050	0.0008
Specific Gravity @ 20/20°C	JP	-	1.035	1.040	1.038
Sulfate*	JP	%	-	0.002	<0.002
Water*	JP	wt. %	-	0.500	0.011
Acidity (as Acetic Acid)*	DOWM 101370	%	-	0.0020	0.0001
Appearance (Clear, Free of Suspended Matter)	Visual	-	Pass	-	Pass
Chlorides*	DOWM 101867	ppm	-	1.0	<1.0
Color	ASTM D5386	Pt-Co	-	10	1
Dimer, Trimer & Higher Polymers*	DOWM 100687	%	-	0.100	0.067
Ethylene glycol*	DOWM 100687	%	-	0.0080	<0.0080
Diethylene Glycol*	DOWM 100687	%	-	0.0080	<0.0080
Odor (practically odorless)*	Olfactory	-	Pass	-	Pass
Specific Gravity @ 20°C*	ASTM D4052	-	1.0376	1.0389	1.0380
Iron*	ASTM E394	ppm	-	0.30	0.04

* Data based on manufacturer's document

Josh

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